



# SOLID STATE DEVICES, INC.

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## Designer's Data Sheet

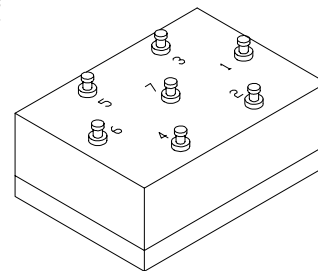
### SPA516L-3UF

**3 AMPS**  
**70 nsec**  
**ULTRA FAST RECOVERY**  
**DUAL SINGLE PHASE**  
**BRIDGE ASSEMBLY**

#### FEATURES:

- Ultra Fast Recovery: 70 nsec Maximum
- 3000 V Blocking Voltage
- 6000 V Dielectric Voltage
- Average Output Current 3 Amps
- Low Reverse Leakage Current
- Glass Passivated Rectifiers
- Hermetically Sealed Discretes
- Aluminum Base for Maximum Thermal Conductivity
- TX and TXV Level Screening Available

SPA516



Maximum Ratings	SYMBOL	VALUE	UNITS
Peak Repetitive Reverse and DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	3000	Volts
Average Rectified Forward Current (Resistive load, 60Hz, Sine Wave)	$I_o$	3 1.5	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A = 25^{\circ}C$ , per leg)	$I_{FSM}$	75	Amps
Operating and Storage Temperature Junction Temperature	$T_{OP}$ & $T_{stg}$ $T_J$	-55 TO +150 -55 TO +175	$^{\circ}C$
Maximum Thermal Resistance Junction to Case (per Assebly) Junction to Case (per Leg)	$\theta_{JC}$	1.125 9.0	$^{\circ}C/W$

NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET # : RA0020B

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Electrical Characteristics <sup>1/</sup> (per leg)		SYMBOL	VALUE	UNITS
<b>Instantaneous Forward Voltage Drop</b> (300 - 500μsec pulse)	$I_F = 0.5A$	$V_{F1}$	3.75	<b>Vdc</b>
	$I_F = 1A$	$V_{F2}$	4.35	
	$I_F = 3A$	$V_{F3}$	5.70	
<b>Reverse Leakage Current</b> (Rated $V_R$ , 300μs pulse minimum)	$T_A = 25^\circ C$	$I_{R1}$	10	<b>μA</b>
	$T_A = 100^\circ C$	$I_{R2}$	1.0	<b>mA</b>
<b>Reverse Recovery Time</b> ( $I_F = 0.5A$ , $I_R = 1.0A$ , $I_{RR} = 0.25A$ )		$t_{RR}$	70	<b>nsec</b>
<b>Isolation Resistance</b> (All Terminals in Common to Case) ( $V = 6000V$ )		$R_{ISO}$	1.0	<b>GΩ</b>

<sup>1/</sup>  $T_A = 25^\circ C$ , Unless otherwise specified

## CASE OUTLINE: SPA516

